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ABSTRACT

The author's primary objective is to present a conceptual model of individualization to (a) provide a common parlance applicable to various perceptions of individualization, (b) provide a model which can be empirically validated and subsequently utilized to measure, evaluate, and generate further research in the area of individualization, and (c) provide criteria to examine existing measurement surveys. The conceptual model of individualization is hierarchical in form on two axes; one representing the degree of student choice behavior, and the other the degree of external instructional control. This control is conceived as applying to three areas; pace, strategy, and objectives. At one extreme of the model's hierarchy is traditional education. In this situation undifferentiated pace, strategy, and objectives are predetermined by the instructor. The next level differs only in that each student proceeds at his/her own pace. This level is referred to as mastery learning. At the next level both pace and strategy can be manipulated by an instructor to meet student needs. Attitude treatment interaction is an example. The next level is contract negotiation. At this level objectives, pace, and strategy can all be manipulated by the instructor in accordance with each student's needs. At the last level students can initiate independent behavior. (A content analysis of four classroom survey methods was done to examine the utility of the model.) (PB)

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A CONCEPTUAL MODEL OF INDIVIDUALIZATION

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A Conceptual Model of Individualization

The authors' primary objective is to present a conceptual model of individualization in order to:

- Provide a common parlance which is applicable to various perceptions of individualization.
- Provide a model which can be empirically validated and subsequently utilized to measure, evaluate and generate further research in the area of individualization.
- Provide criteria to examine existing measurement surveys.

Almost all definitions of individualized instruction focus upon alternative pacing, alternatives in instructional strategies and alternative instructional objectives. (Cronbach 1967; Southworth 1971; Linvall and Bolvin 1970; Frase 1972; Tosti and Harmon 1972; Walberg 1974; Hambleton 1974) The definitions differ as to the degree of alternatives;from whom the alternatives are derived;and as to whether the teacher and/or student choses the alternatives. Given the wide agreement as to the components of individualized instruction and the parameters of choice,a conceptual model of individualization is presented.

The conceptual model of individualization is hierarchical in form upon two axes; one representing the degree of student choice behavior and the other the degree of external instructional control. This control is conceived as applying to three areas; pace, strategy and objectives.

The following is a description of the hierarchy from its lowest level wherein objectives, strategy and pace are predetermined by those responsible for instruction to the highest level wherein the student is in complete control of the objectives, strategy and pace. Relevant literature will be briefly discussed for each level.

At one extreme of the model's hierarchy is traditional education. Traditional education - also known as the traditional classroom,closed classroom and self-

contained classroom - is the conventional practice found in many of today's schools. In the traditional classroom, undifferentiated pace, strategy and objectives are predetermined by the instructor. Even though there may be several variations, the basic structure adheres to the "transmission of knowledge" model of learning in which a common learning experience is provided for an entire class, as in a group lecture, Trotta (1974). Traditional education implies a common set of goals for all students, Roth (1971).

The next level of the model instruction differs from traditional education in that each student proceeds at his own pace. The strategy and objectives, however, are still predetermined.

In many classrooms, modifications in rate of progress - reflecting an awareness that each student learns at a different rate - are the only distinguishable characteristics separating more individualized instruction from traditional. In accordance with this theory Carroll (1963)states that aptitude is the amount of time required by the learner to attain mastery.

In brief, Carroll's model says that the level of mastery reached by a student on any instructional task or school objective is a function of the time actually spent learning the material and the amount of time he needs to master the material. This theory was incorporated into programs called Mastery Learning (Bloom 1968; Block 1971)

The next step of the conceptual hierarchy is when both pace and strategy may be manipulated by an instructor in accordance with the needs of the student. Attitude Treatment Interaction (ATI) is an example. While traditional methods promote a conformity that pays little attention to the establishment of specific strategies for each student, ATI builds upon this need, Cronbach and Snow (1969).

The Continuous Progress Plan may serve as an illustration of an ATI Program. As its title implies, this is a general plan to provide for the uninterrupted development of each child without restrictions as to specific materials or modes

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of instruction. Individual adaptation by teachers are encouraged as long as the fundamental objective of "providing each child with appropriate learning experiences" is met. (Edling 1970). One major problem at this level of individualization is the lack of findings of aptitude - treatment - interactions. (Bracht 1970) Hambleton (1974) reports that in some programs the decision as to the proper learning strategy is left to the student.

The next level of the model is contract negotiation wherein objectives, pace and strategy may all be manipulated by the instructor in accordance with the needs and wishes of the student.

A contract is a prescription written for and with the student. Contracts enable each student to work independently on objectives which he and his teacher have agreed upon. Along with the objectives, strategy and rate of progression are included in the contract. Individual pacing, growth and selection of materials is permitted (Dunn 1972).

In Contract Negotiation the student is involved in decisions concerning his course of study but is not totally responsible for his program. The level of independent student behavior in the model is directed toward student behavior which is, in the mind of the learner, independent of the instructor.

The Multi-Unit Elementary School, a project developed by the Wisconsin Research and Development Center for Cognitive Learning (Klausmeir 1971) is an example of education in which the student may initiate independent behavior. The multi-unit school has an organizational pattern for instruction. It utilizes administrative personnel, instructors and parents. The Research and Development Center has developed materials and instructional procedures in reading, mathematics, and environmental education, and motivation.

The hierarchy in the model is based on the degree of student choice behavior. Choice can be perceived in two ways. First, it can be thought of as alternatives which are chosen by the teacher. These choices can be in the areas of instructional

strategies and/or objectives of instruction. These type choices are similar to ATI and contracts. The second type of choice resides within the student and here choices are made among time spent, instructional strategies and objectives. In the model presented this becomes the highest level individualization. However, there is no implication of value. Higher levels of the model do not denote more of something good but only denote more individualization. It is questionable as to what is the appropriate level of the model for instruction. The choice as to what level of the hierarchy one uses is certainly particular to a context and within the same classroom different levels can be going on concurrently.

The literature has tended to be value loaded with the implication being that unless one is not at the highest level one is not individualizing. For example, Frase (1974) in a brief article describes individualization being composed of pacing, differentiated objectives, differentiated materials, and personalized instruction. He concludes as follows: "To truly individualize instruction, all four elements must be individualized. . . But without including objectives, materials and personalized instruction, true individualization does not exist." [1]

The model attempts to make educators aware of what level they are pursuing. It is hoped that this awareness might enable them to make systematic decisions as to what level is desirable under what circumstances.

Figure I presents the hierarchical model in a graphic form:

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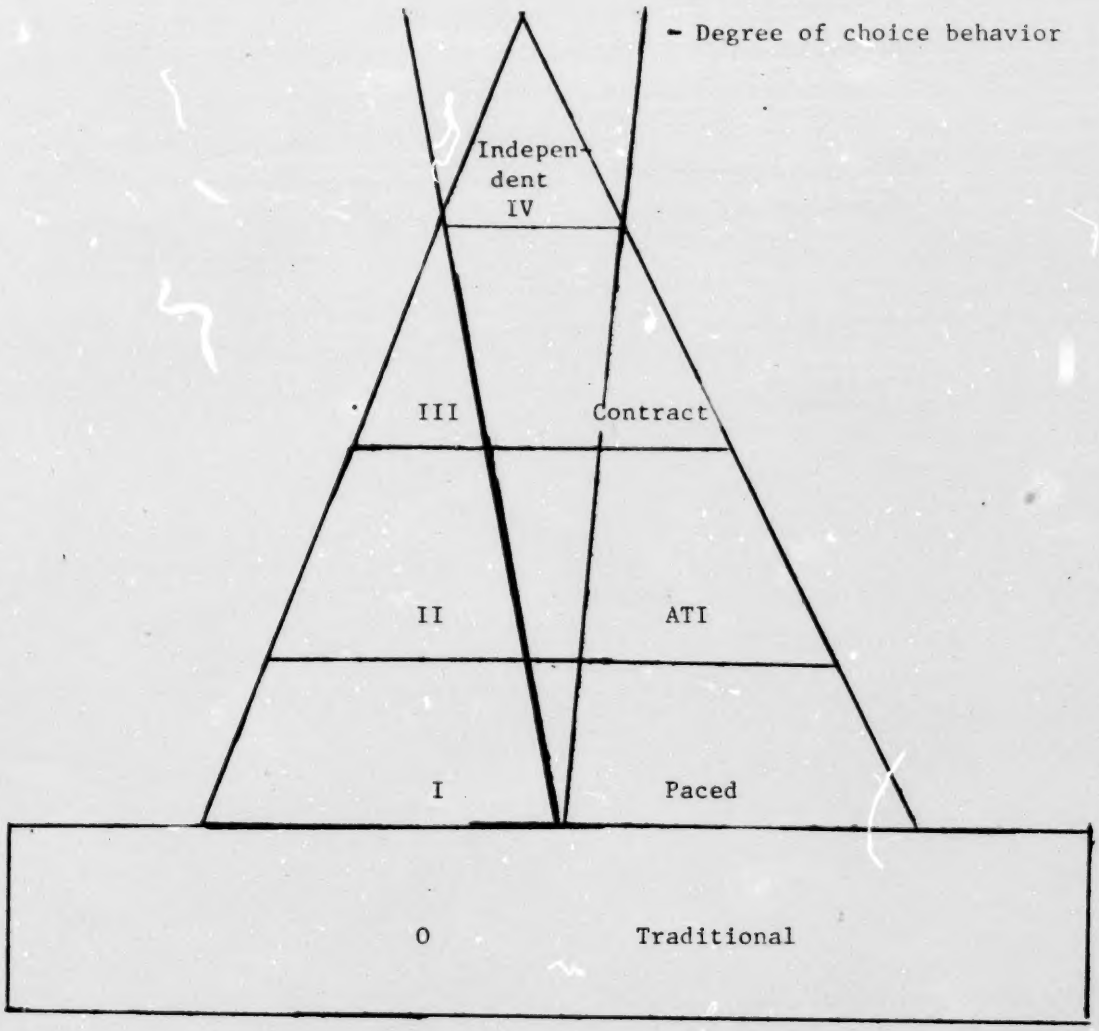
[1] Frase, Larry E. "The Concept of Instructional Individualization". Educational Technology. July 1972 p. 73.

Figure I Conceptual Model of Individualization



0 - Pace, strategy and objectives undifferentiated and chosen by teacher

I - Pace varied by teacher, strategies and objectives undifferentiated

II - Pace and strategies varied by teacher objectives undifferentiated

III - Pace, strategies and objectives negotiated between student and teacher

IV - Pace, strategies and objectives chosen solely by student

In order to examine the utility of the model, a content analysis of four classroom survey methods was done: Individualized Instruction Scale (II) (Project Individualized Instruction 1974); The I Scale (Woog and Gellman 1974); Walberg Observation Scale (Walberg 1974); Dimensions of Schooling (Disc) (The Ontario Institute for Studies in Education 1973). Although both the Walberg and DISC were originally constructed to measure "openness", they are included because they have been used to measure individualization and because there is some confusion as to the two terms -openness and individualization.

Table One presents the number and percent of items from each survey that were judged as attempting to measure a specific level of individualization.

Table I Number and Percent of Items From Four Surveys by Category of Level of Individualization

Survey	II		I Scale		Walberg		DISC	
Category	# of Items	%	# of Items	%	# of Items	%	# of Items	%
I Paced	12	17	3	30	3	10	1	3
II ATI	7	10	0	0	3	10	3	10
III Contract	10	14	1	10	2	6	12	40
IV Independent	3	4	3	30	3	10	7	23
Other	38	54	3	30	20	65	7	23
TOTAL	70		10		31		30	

It would seem that most items that were not judged to be specific to one of the categories of individualization can be best judged as manifestations of variables that Rosenshine and Furst (1971) identified as promising of good teaching. These include among others, clarity, variability, enthusiasm and use of student ideas and general indirectness. These variables are not method bound, but rather can be demonstrated using several methods including individualization.

What follows is a sample of items from the four surveys that were judged as irrelevant (other) to the levels of individualization. An attempt is made to categorize them

Table 2 Items Judged Other and Categorized by Non-Specific Method Variable

Item	Survey	Item #	Variable
Books are supplied in diversity and profusion	Wallberg	9	variability
The program includes use of the neighborhood	Wallberg	15	variability
Teacher promotes a purposeful atmosphere by expecting and enabling children to use time productively and to value this work and learning	Wallberg	25	clarity
The class operates with clear guidelines made explicit	Wallberg	37	clarity
Learning Environment This area concerns the size of the area used by students during the school day	DISC	11	variability
There is equipment in the classroom appropriate to the subject	II	18	variability
Objectives are explained to each student	II	43	clarity
Objectives are behaviorally stated	II	67	clarity
The entire observation time is not dominated by the teacher	I Scale	2	general indirectness

There seems to be some confusion when attempting to measure methods which include variables which are not explicit within that method. At present there are three general areas in the study of effectiveness. One area attempts to look at generalizable variables which do not seem to be method bound. Another area attempts to look at variables which theoretically define the method. The third area is a

confounding of the two. If we wish to examine a method it should not be confounded with variables that are probably of a more general nature and can exist independent of the specific method. The hiearchial model of individualization attempts to set forth the parameters in describing the method of individualized instruction. The next task is to develop observation methods that operationalize the model assuming that the model is congruent with a unified theory of individualization.

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